

### **REMARKS**

Claims 2-43 are pending in the above-captioned patent application after this amendment. The specification has been amended to correct obvious typographical errors. Claims 1-36 were rejected. The Applicants respectfully traverse the rejection of claims 3, 11-26 and 31-36. Claim 1 has been canceled without prejudice, claims 2, 3, 5, 7, 10, 11, 22 and 27 have been amended, and new claims 37-43 have been added by this amendment for the purpose of expediting the patent application process in a manner consistent with the goals of the Patent Office pursuant to 65 Fed. Reg. 54603 (September 8, 2000), even though the Applicants believe the previously pending claims were allowable. More specifically, claims 2, 3, 7 and 10 have been amended to depend from new claim 37. Claim 22 has been amended to correct an obvious typographical error. Further, claim 11 has been amended to include all of the limitations of its base claim, and is therefore not narrower in scope than previously pending claim 11.

Support for the amendments to the claims and for the new claims can be found throughout the originally filed application, including the originally filed claims, the drawings and the specification. More specifically, support for the amendments to claims 5 and 27, and for new claims 37-43 can be found at least in claims 1, 5, 6 and 11-16, in Figures 1-7, and in the specification at page 5, line 29 through page 6, line 11. Further, new claim 42 is based on original dependent claim 5 rewritten in independent form to include the limitations of its base claim and any intervening claims. Therefore, new claim 42 is not narrower in scope than previously pending claim 5.

No new matter is believed to have been added by this amendment. Consideration of the Application is respectfully requested.

### **Objections to the Claims**

Claim 22 is objected to because there is no antecedent basis for the first core, the conductor or the actuator combination. Claim 22 has been amended to depend from claim 17, as provided above. Accordingly, the Applicants submit that the objection should be withdrawn.

### **Rejections Under 35 U.S.C. § 102**

Claims 1-10 and 27-29 have been rejection under 35 U.S.C. § 102(b) as being anticipated by Japanese reference 54-044710 A ("Japanese reference").<sup>1</sup> Claim 1 has been canceled without prejudice. Thus, the rejection of claim 1 is believed to be moot. Claims 2-10 now depend from new claim 37, which as explained below, includes features not taught or suggested by the cited references.

Additionally, the Applicants respectfully traverse the rejection by the Patent Office of original claims 5 and 6 because the Japanese reference does not teach or suggest the features of these claims. As provided above, original claim 5 has been re-presented herein as independent claim 42 for the purpose of the traversal. Further, original claim 6 has been re-presented herein as dependent claim 43.

For example, the Japanese reference is directed toward an ebullition cooling type electromagnet. The electromagnet includes a coil 1 having part of its outer periphery in contact with a cooling medium which flows in gaps 6, 7 positioned between the coil 1 and a core 3. As illustrated in Figures 1, 2a, 3a and 5-8, the cooling medium does not appear to contact all surfaces of the coil 1. More specifically, no gap 6, 7 exists along at least one of the surfaces of the coil 1.

In contrast to the Japanese reference, claim 42 is directed toward a circulating system that requires "a circulation housing that is sized and shaped to substantially encircle the conductor and provide a fluid passageway between the circulation housing and the conductor; a fluid inlet into the fluid passageway, the fluid inlet being in fluid communication with the fluid source so that fluid from the fluid source is supplied to the fluid passageway; and a fluid guide that guides the flow of the fluid in the fluid passageway so that the fluid flows around the conductor, the fluid guide including a first rail and a second rail that are positioned in the fluid passageway, the rails cooperating to direct the flow of fluid in the fluid passageway over an outer perimeter, a top surface, a bottom surface and an inner perimeter of the conductor." These features are not taught or suggested by the cited reference. Thus, the rejection by the Patent Office

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<sup>1</sup> An English translation of the Japanese reference has been filed concurrently herewith in a Supplemental Information Disclosure Statement.

under 35 U.S.C. § 102(b) is unsupported by the Japanese reference. Consequently, the rejection by the Patent Office of claim 5 should be withdrawn, and claim 42 should be allowed. Because claim 43 depends from claim 42, a rejection of claim 43 is also not supported by the Japanese reference.

Additionally, in contrast to the Japanese reference, amended claim 27 is directed toward a method that requires the steps of "providing a circulation housing including a tubular shaped housing cavity that receives the conductor and defines a fluid passageway between the circulation housing and an outer perimeter, a top surface, a bottom surface and an inner perimeter of the conductor; positioning the conductor in the housing cavity; and directing a fluid through the fluid passageway to cool the conductor." These steps are not taught or suggested by the Japanese reference. Therefore, the rejection of claim 27 is not supported by the art and should be withdrawn. Because claims 28-29 depend from claim 27, the rejection of these claims should also be withdrawn.

### **Rejections Under 35 U.S.C. § 103**

Claims 11-26 and 31-36 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Yuan et al. (US 6,069,417), in view of the Japanese reference. Further, claim 30 is rejected under 35 U.S.C. § 103(a) as being unpatentable over the Japanese reference in view of Yamaguchi (US 6,112,531 A). The Applicants respectfully traverse the rejection of claims 11-26 and 31-36 on the basis of common ownership of both the present invention and Yuan et al. pursuant to MPEP 706.02(I)(1).

### **Common Ownership:**

"Effective November 29, 1999, subject matter which was prior art under former 35 U.S.C. 103 via 35 U.S.C. 102(e) is now disqualified as prior art against the claimed invention if that subject matter and the claimed invention 'were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.'" MPEP 706.02(I)(1); emphasis added.

The present application and Yuan et al. were, at the time the invention disclosed in the present application was made, commonly owned by Nikon Corporation and/or subject to an obligation of assignment to Nikon Corporation. Consequently, Yuan et al.

should be disqualified from use as prior art in a rejection under 35 U.S.C. § 103. Accordingly, the rejection by the Patent Office under 35 U.S.C. § 103(a) should be withdrawn.

#### **New Claims**

In addition to new claims 42-43 discussed above, new claims 37-41 have been added by this amendment. New claims 37-41 are of a slightly different scope than the previously pending claims. However, in view of the Japanese reference discussed above, claims 37-41 are believed to be allowable.

In contrast to the Japanese reference, new claim 37 is directed toward a circulating system that requires "a circulation housing that is sized and shaped to substantially encircle the conductor and provide a fluid passageway between the circulation housing and at least a portion of each of the outer perimeter, the top surface, the bottom surface and the inner perimeter of the conductor; and a fluid inlet into the fluid passageway, the fluid inlet being in fluid communication with the fluid source so that fluid from the fluid source is supplied to the fluid passageway." These features are not taught or suggested by the cited references. Thus, claim 37 should be allowed. Because claims 2-10 and new claims 38-41 depend directly or indirectly from claim 37, they should also be allowed.

#### **Remaining References**

The references cited by the Examiner, but not relied on for the rejection of claims, have been noted. The remaining references are no more pertinent than the applied references, therefore, a detailed discussion of these remaining references is deemed unnecessary for a full and complete response to the Office Action.

**Conclusion**

In conclusion, Applicants respectfully assert that claims 2-43 are patentable for the reasons set forth above, and that the application is now in a condition for allowance. Accordingly, an early notice of allowance is respectfully requested. The Examiner is requested to call the undersigned at 858-456-1951 for any reason that would advance the instant application to issue.

Dated this the 12<sup>th</sup> day of March, 2004.

Respectfully submitted,



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